

## The Examination of Parents' Perceptions and Motivations Regarding Type 1 Diabetes Management Technologies

**Authors :** Maria Dora Horvath, Norbert Buzas, Zsanett Tesch

**Abstract :** Diabetes management poses many unique challenges for children and their parents. The use of a diabetes management device should not be one of these challenges as the purpose of these devices is to make the management more convenient. The objective of our study was to examine how demographical, psychological and diabetes-related factors determine the choices parents make regarding their child's diabetes management technologies and how they perceive advanced devices. We conducted the study using an online questionnaire with 318 parents (mostly mothers). The questions of the survey were about demographical, diabetes-related and psychological factors (diabetes management problems, diabetes management competence). In addition, we asked the parents opinions about advanced diabetes management devices. We expanded our data with semi-structured in-depth interviews. 61 % of the participants Self-Monitored Blood Glucose (SMBG), and 39 % used a Continuous Glucose Monitoring System (CGM). Considering insulin administration, 58 % used Multiple Daily Insulin Injections (MDII) and 42 % used Continuous Subcutaneous Insulin Infusion (CSII). Parents who used diverse combinations of diabetes management devices showed significant differences in age (parents' and child's), the monthly cost of diabetes, the duration of diabetes, the highest level of education and average monthly household income. CGM users perceived diabetes management problems significantly more severe than SMBG users and CSII users felt significantly more competent in diabetes management than MDII users. Avoiding CGM use due to lack of financial resources was determined by diagnosis duration. While avoiding its use by the cause of the child rejecting, it was determined by the child's age and diabetes competence. Using MDII instead of CSII because of the child's rejection was determined by the monthly cost of diabetes and child's age. We conducted a complex empirical study in which we examined perceptions and experiences of advanced and less advanced diabetes management technologies comprehensively. Our study highlights the factors that fundamentally influence parents' motivations and choices about diabetes management technologies. These results could contribute to developing diabetes management technologies more suitable for children living with type 1 diabetes and their parents.

**Keywords :** advanced diabetes management technologies, children living with type 1 diabetes, diabetes management, motivation, parents

**Conference Title :** ICPDTD 2020 : International Conference on Paediatric Diabetes and Treatments of Diabetes

**Conference Location :** Prague, Czechia

**Conference Dates :** March 19-20, 2020